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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/960,735	09/24/2001	Tooru Ooiwa	P 281531 57617-US-KK	4235

909 7590 06/24/2002
PILLSBURY WINTHROP, LLP
P.O. BOX 10500
MCLEAN, VA 22102

EXAMINER

LE, DANG D

ART UNIT

PAPER NUMBER

2834

DATE MAILED: 06/24/2002

18

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/960,735

Examiner

Dang D Le

Applicant(s)

OOWA, TOORU

Art Unit

2834

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 17 May 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) 16-20 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-15 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 24 September 2001 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 5.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

DETAILED ACTION

Election/Restrictions

1. Applicant's election with traverse of group I, claims 1-15 in Paper No. 11 is acknowledged. The traversal is on the ground(s) that "the reasoning that 'the product as claimed can be used to generate electricity' does not provide proper grounds for restriction" and that "the search and examination of the entire application could be made without serious burden". This is not found persuasive because the product as claimed can be used to generate electricity as discussed in the previous office action while the method as claimed can be used to make a motor. In addition, the method as claimed involves steps that require examination and search in class 29, subclass 596. Moreover, the search required for Group II is not required for Group I and these inventions have acquired a separate status in the art because of their recognized divergent subject matter, restriction for examination purposes as indicated is proper.

The requirement is still deemed proper and is therefore made FINAL.

2. Claims 16-20 are withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to a nonelected Group II, there being no allowable generic or linking claim. Applicant timely traversed the restriction (election) requirement in Paper No. 11.

Drawings

3. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the "regular slots", the

"irregular slots", the "discontinuity of the stator winding at a region where the irregular slots are located" as shown in claim 1 must be shown or the feature(s) canceled from the claim(s). The drawings must also show the features claimed in claims 6 and 8. No new matter should be entered.

A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Claim Objections

4. Applicant is advised that should claim 4 be found allowable, claim 5 will be objected to under 37 CFR 1.75 as being a substantial duplicate thereof. When two claims in an application are duplicates or else are so close in content that they both cover the same thing, despite a slight difference in wording, it is proper after allowing one claim to object to the other as being a substantial duplicate of the allowed claim. See MPEP § 706.03(k).

Claim Rejections - 35 USC § 112

5. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

6. Claims 1-15 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. The drawings do not

clearly show the "regular slots", the "irregular slots", the "discontinuity of the stator winding at a region where the irregular slots are located" and the specification neither clearly describes these features in page 12.

It is not clear what "an individual coil rounded at least time around the stator core" is in page 5, lines 14-15. Claim 3 has a similar problem when reciting "a continuous wire wound at least time around the stator core".

7. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

8. Claims 1-15 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 1 is indefinite because it is not clear what the difference is between the "regular slots" and the "irregular slots". It is neither clear what the "discontinuity of the stator winding at a region where the irregular slots are located" is.

It is not clear how "a continuous wire" is "wound at least time around the stator core".

Claim Rejections - 35 USC § 102

9. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

10. Claims 1-12 and 15 are rejected under 35 U.S.C. 102(b) as being anticipated by Lamborn.

Regarding claim 1, Lamborn shows a rotary electric machine comprising:

- A rotor (1); and
- A stator (6, 7) having a stator core with a plurality of slots and a stator winding, wherein:
 - The slots include a plurality of regular slots (between 5-20, 20-2, 3-20, and 20-4) and a plurality of irregular slots (between 2-3 and 4-5), and
 - The stator winding has a plurality of in-slot portions accommodated in the slots and coil ends, the in-slot portions and the coil ends being arranged to provide a discontinuity (left and right in Figure) of the stator winding at a region where the irregular slots (between 2-3 and 4-5) are located.

Regarding claim 2, it is noted that Lamborn also shows the stator winding having plurality of conductors for providing the in-slot portions, the conductors being wound one over another.

Regarding claim 3 it is noted that Lamborn also shows the conductor being continuous wire wound at least time around the stator core.

Regarding claims 4 and 5, it is noted that Lamborn also shows the stator winding having output leads (from brush 11) extending beyond the coil ends, the output leads being located on a region where the regular slots are located.

Regarding claim 6, it is noted that Lamborn also shows the in-slot portions having a plurality of regular in-slot portions being connected with other in-slot portions

accommodated in two other slots, respectively, and a plurality of irregular in-slot portions being connected with other in-slot portions accommodated in another slot, the regular in-slot portions being accommodated in the regular and irregular slots, the irregular in-slot portions being accommodated in the irregular slots only.

Regarding claim 7, it is noted that Lamborn also shows the stator winding being a wave winding.

Regarding claim 8, it is noted that Lamborn also shows the in-slot portions having a plurality of regular in-slot portions being connected with other in-slot portions accommodated in two other slots, respectively, and a plurality of irregular in-slot portions being connected with other in-slot portions accommodated in another slot, the regular in-slot portions being accommodated in the regular slots only, the irregular in-slot portions being accommodated in the irregular slots and the regular slots.

Regarding claim 9, it is noted that Lamborn also shows the stator winding being a lap winding.

Regarding claim 10, it is noted that Lamborn also shows the in-slot portions being divided into an inner layer and an outer layer, each of the regular in-slot portions disposed in one of the layer is connected with the other two in-slot portions disposed in the other layer in the other two slots, and each of the irregular in-slot portions disposed in one of the layer is connected with the other in-slot portions disposed in the other layer in one of the slots.

Regarding claim 11, it is noted that Lamborn also shows the irregular slots being located side by side.

Regarding claim 12, it is noted that Lamborn also shows the stator winding having a plurality of conductors for providing the in-slot portions, the stator winding having no conductor that crosses over a region where the irregular slots are located.

Regarding claim 15, it is noted that Lamborn also shows the stator core having at least one slit (right side) along an axial direction.

Claim Rejections - 35 USC § 103

11. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

12. Claims 13 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lamborn in view of Enomoto et al.

Regarding claim 13, Lamborn shows all of the limitations of the claimed invention except for the stator having a plurality of stator windings, the stator windings being radially stacked in the slot.

Enomoto et al. show the stator having a plurality of stator windings, the stator windings being radially stacked in the slot (Figure 1b) for the purpose of increasing the winding occupation rate.

Since Lamborn and Enomoto et al. are all from the same field of endeavor; the purpose disclosed by one inventor would have been recognized in the pertinent art of the others.

It would have been obvious at the time the invention was made to a person having ordinary skill in the art to stack the stator windings radially in the slot as taught by Enomoto et al. for the purpose discussed above.

Regarding claim 14, it is noted that Enomoto et al. also show the stator having a plurality of stator windings, one of the stator windings being arranged to surround another stator winding (Figure 7a).

Information on How to Contact USPTO

13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dang D Le whose telephone number is (703) 305-0156. The examiner can normally be reached on Monday through Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nestor Ramirez can be reached on (703) 308-1371. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 308-7382 for regular communications and (703) 308-7382 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-1782.

DDL
June 20, 2002

DL

Dang D. Le